

1. Applicant's election with traverse of Group I in the reply filed on January 27, 2010 is acknowledged. The traversal is on the ground(s) that the special technical feature is that the apparatus and method are used for analyzing interactions. This is not found persuasive because the apparatus limitations do not require any interaction. The apparatus limitations are those common to both groups and do not constitute a special technical feature as demonstrated by the cited prior art.

The requirement is still deemed proper and is therefore made FINAL.

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was

not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 1, 3, 5, 7-16 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jindal (6358692) in view of EP 0848251 (hereafter EP).

Jindal teaches a method of analyzing the interaction between ligands in a sample and a target. The sample and target are introduced into a size exclusion chromatography column (col. 19, lines 40-42), any ligand/target complex formed is separated from unbound ligand and target (col. 19, lines 45-50) and binding is detected by comparison to the eluate from a column containing target alone (col. 20, lines 22-27). Detection of chromatograms is by conventional LC detector (col. 26, lines 4-25) and MS (col. 25, lines 45-50). See also, Figs. 1-2. Eluent from the first column can be passed to subsequent columns for further analysis (Figs 3-4). In that ligands and targets are typically of different molecular weights, it is the examiner's position that they inherently elute at different rates.

Jindal fails to teach the order of injection.

EP teaches introducing a slower moving substance into a separation column, then introducing a faster moving component, detecting, and comparing the "chromatogram" to a profile of one substance alone (Fig. 1).

It would have been obvious to inject the sample and target into the chromatography column of Jindal in the order of EP in order to permit mixing, reaction and separation as taught by EP. With respect claims 8-9, 15-16 it would have been

obvious to optimize the relative quantities and absolute amounts of the interacting components in order to provide the desired proportions for reaction. With respect to claims 10-11, it would have been obvious to use alternative known injection techniques, such as the repeated segmented injection techniques of flow injection analysis in order to introduce samples to a capillary tube. With respect to claims 12-14, each "stage" is simply a segment of the column and the profile is detected after passage through the last segment (claim 12), the second (slower moving) component is introduced into the segments before the first component (claim 13), until the first component catches up to the second component, at which time they enter the next segment together (claim 14).

6. Applicant's arguments with respect to claims above have been considered but are moot in view of the new ground(s) of rejection.
7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jan M. Ludlow whose telephone number is (571) 272-1260. The examiner can normally be reached on Monday, Tuesday and Thursday, 11:30 am - 8:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill A. Warden can be reached on (571) 272-1267. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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